

Google's Electricity Initiative

Web Firm to Invest In Renewable Power, Aims to Upend Coal

By REBECCA SMITH and KEVIN J. DELANEY

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[Google](#) Inc. said it expects to invest hundreds of millions of dollars in efforts to make renewable electricity cheaper than power from coal-fired plants, aiming to hasten the deployment of clean energy and save money for itself and others.

Co-founder Larry Page said the Internet company's goal is to facilitate, through investments in projects and companies, the building of power-generating facilities that can produce about 1,000 megawatts of renewable electricity -- as much as one or two conventional power plants -- for three cents a kilowatt hour or less. That would be inexpensive enough to compete, without public subsidies, against coal plants.

In 2006, coal-fired plants produced 49% of U.S. electricity, compared with about 2.4% produced by forms of renewable power other than hydroelectricity. But coal is under attack because its combustion is a leading source of carbon-dioxide emissions, which contribute to climate change. It also creates pollution that harms public health.

Mr. Page said the Mountain View, Calif., company is open to any promising technologies and expects Google to function in many roles: as an investor, research partner and purchaser of electricity.

Google also might operate some of the generating facilities, potentially alongside the power-gobbling computer data centers that run its Web-search engine and other Internet services.

Mr. Page said the renewable-energy initiative, involving both the company itself and its Google.org philanthropic arm, wasn't financially material to Google at this point but that he believed it would generate positive returns on Google's investment over time. The company said it would spend millions of dollars on research and development as well as investments in renewable energy next year, and would create a renewable-energy R&D group.

The company is primarily looking at solar, geothermal and wind technologies that show potential for making electricity so cheaply they can displace fossil-fuel plants. "We're optimistic we can do this in years, not decades," Mr. Page said, adding that even though lots of venture capital is flowing to renewable-energy start-ups and the government funds research through its national energy labs, "we don't see a lot of investment in very aggressive, low-cost things" that could reshape the coal-heavy generation mix and reduce power-industry emissions.

One firm Google already is supporting is Makani Power, a company based in Alameda, Calif., working on high-altitude, wind-power systems. Mr. Page said he believes most of Google's investments will be in technologies capable of producing grid-scale quantities of electricity that would use existing infrastructure like the high-voltage transmission system.

Google co-founder Sergey Brin said the company will encourage its partners to license their technology for modest sums to encourage rapid deployment and bring electricity to parts of the world that don't have it now -- roughly 1.6 billion people, or 24.5% of the world's population in 2005. "We don't feel like we need to own every piece" of the technology, Mr. Brin said. "We want the problem solved."

Write to Rebecca Smith at rebecca.smith@wsj.com and Kevin J. Delaney at kevin.delaney@wsj.com

